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# Public support for 'soft' versus 'hard' behavioural public policies: review of the evidence

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# Public support for 'soft' versus 'hard' public policies: review of the evidence

**Abstract**

This article reviews the literature on public support for 'soft' versus 'hard' policy instruments for behaviour change, and the factors that drive such preferences. Soft policies typically include 'moral suasion' and educational campaigns, and more recently behavioural public policy approaches like nudges. Hard policy instruments, such as laws and taxes, restrict choices and alter financial incentives. In contrast to the public support evidenced for hard policy instruments during COVID-19, prior academic literature pointed to support for softer policy instruments. We investigate and synthesise the evidence on when people prefer one type of policy instrument over another. Drawing on multi-disciplinary evidence, we identify perceived effectiveness, trust, personal experience and self-interest as important determinants of policy instrument preferences, along with broader factors including the choice and country context. We further identify various gaps in our understanding that informs and organise a future research agenda around three themes. Specifically, we propose new directions for research on what drives public support for hard versus soft behavioural public policies, highlighting the value of investigating the role of individual versus contextual factors (especially the role of behavioural biases); how preferences evolve over time; and whether and how preferences spillovers across different policy domains.

**Keywords:** *Public Policy Preferences, Hard policy instruments, Soft policy instruments, Covid19, Contextual factors, Health policy attitudes, Environment policy attitudes*

**Public support for 'soft' versus 'hard' public policies:**

**Review of the evidence**

## 1. Introduction

This article reviews the literature studying the public support for 'soft' versus 'hard' behaviour change policies, and what factors drive such preferences. Policy instruments, the precise measures by which governments pursue their policy goals, vary in their governance principles and behavioural assumptions (Hood, 1986; Schneider and Ingram, 1990). Fundamentally, policy instruments can be differentiated based on whether they direct and mandate people to behave in certain ways, or indirectly encourage them to (Hood, 2007). Policy instruments can be understood on a spectrum of increasing government intrusiveness, as visualised in the Nuffield Intervention Ladder for public health policies (Nuffield, 2007). In this framework, policy measures range from "doing nothing", to providing information for the public, to guiding people's choices first through behavioural interventions and then financial incentives, up to the highest levels of intervention which restrict and eliminate personal choices."

Following on from this, we consider 'hard' policy instruments as those that restrict choice through laws, regulations and mandates and can alter financial incentives through levies, taxes and subsidies (John, 2011; Zehavi, 2012). Conventional soft policies include 'moral suasion' (Romans, 1966) and educational campaigns, such as 'fact-based' health warnings, which focus on providing information to alter behaviours (Schneider and Ingram, 1990, p. 517). A nudge, like changing the default option on a savings plan or green energy provider, can also be conceptualized as a behaviourally informed 'soft' policy (Thaler and Sunstein, 2008). Nudges modify the choice architecture or environment in which we make decisions, but do not restrict personal choice (since people can opt-out) nor do they change the financial incentives. Other behavioural

public policy instruments that sit on the 'soft' end of the spectrum include 'nudge pluses' (Banerjee and John, 2020), 'boosts' (Hertwig and Grüne-Yanoff, 2017) and 'thinks' (John and Stoker, 2019).

Recent work has shown that policymakers are increasingly using soft, behaviourally informed policies to produce desirable social outcomes, often in combination with harder measures (John, 2018; Loewenstein and Chater, 2017). Nudges are considered especially cost-effective: a recent study found the impact-to-cost ratio of various nudges to be significantly higher than traditional policies such as monetary incentives (Benartzi et al. 2017). Not surprisingly, then, behavioural public policy instruments have become popular across a wide range of policy domains including health, energy, and sustainability (Frederiks et al., 2015; Halpern et al., 2015). Research has increasingly turned to the question of how much public support soft policies have. There are good reasons to expect the public will prefer policy instruments that can deliver effective outcomes without imposing significant financial and regulatory burdens on governments and citizens (Oliver and Ubel, 2014, p. 340). Elected governments need to be aware of public preferences for policy instruments, since acceptability is linked to legitimacy (Capano and Lippi, 2017, p. 276), which in turn is important for compliance and policy effectiveness (John, 2011).

While understanding what factors drive the public's preferences for types of policies has always been important, it is a particularly timely issue in the context of the COVID-19 pandemic. In contrast to the recent academic literature emphasizing an 'almost worldwide consensus on nudging' and popular support for nudges (Sunstein et al., 2018), it is hard policies which have been most popular over the past few months. For instance, in the UK, travel bans, school closures and social isolation have garnered high public support as a response to the COVID-19 pandemic (see Table 1), and a majority of

respondents said they complied with lockdown measures. Other evidence from 15 western European countries indicates that public satisfaction with democracy and trust in government increased once lockdowns were in place during March 2020 (Bol et al., 2020).

***Table 1***

***Support for lockdown measures in UK by three population clusters[1]***

| Cluster (share of UK sample) | Proportion following lockdown measures (completely or nearly all the time) | Proportion supporting lockdown measures (and additional police powers) |
|---|---|---|
| Not anxious or losing sleep over Coronavirus (the 'accepting' cluster, 48%) | 87% | 91% (83%) |
| Feel more anxious or depressed (the 'suffering' cluster, 44%) | 93% | 93% (85%) |
| Too much fuss about the risk of the Coronavirus (the 'resisting' cluster, 9%) | 49% | 53% (49%) |

Source: Duffy and Allington (2020)

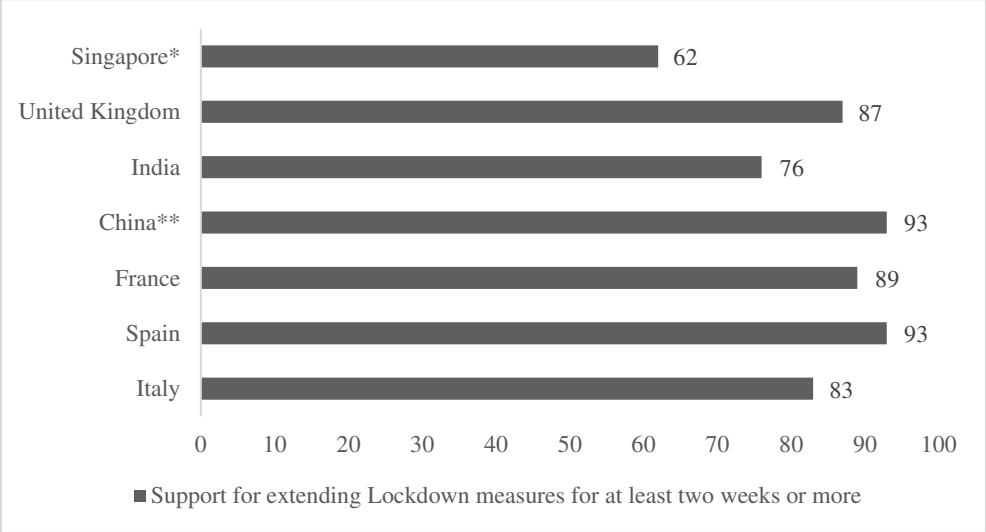
This support for hard policies, moreover, does not appear to be a knee-jerk reaction, but a sustained public sentiment. Initial findings from surveys found UK residents' support for hard policy measures stayed high during the lockdown; with 93 percent supporting these restrictive measures and 87% of respondents in April 2020 believing that the lockdown should have been extended by a further three weeks (Recchia, 2020). The support for further lockdown measures has been consistently high, with 78% and 85%

[1] The study by Duffy and Allington (2020) is based on a survey of 2250 residents in the United Kingdom, jointly conducted by King's College London and Ipsos Mori. These are opinion polls and we must exercise some caution in generalising these findings over time.

backing the second and third UK lockdowns respectively (Smith, 2020; Ibbetson, 2021a). Over three-quarters of these respondents were of the opinion that the newer lockdown policies should have been introduced earlier (Ibbetson, 2021b). Similar sentiments had emerged in other countries: 95 percent of urban Indians supported lockdown measures (Bhatia, 2020) and over 70 percent of Chinese respondents favoured strict travel bans (Ipsos, 2020). Almost 90 percent of survey respondents in France, Spain and Italy, and almost three-quarters in the United States supported lockdown measures (Redfield & Wilton Strategies, 2020). When asked about extending the lockdown, more than three-quarters of respondents in India were in favour of doing so (Figure 1), and around 50 percent in France, Italy, Spain and Germany.

***Figure 1***

***Public support for harder measures***




*Notes*: *Support for imposing self-quarantine measures; **Support for self-quarantine measures. Authors' calculations drawing on data from Bhatia (2020) for India, Freitas (2020) for United Kingdom, Redfield & Wilton Strategies (2020) for France, Spain and Italy, Infogram (2020) for Singapore and Ipsos (2020) for China.

While this evidence is crucial to understand fast-changing evolving public opinions - especially during crises periods - the data is based on opinion polls and questionnaire surveys. Most studies, moreover, ask binary questions (yes/no; support/oppose) that may miss subtle differences in individual preferences, and may not fully represent the spectrum of public opinion. Notwithstanding these limitations, however, the overall picture this emerging body of findings is one of governments having been out of step with public appetite for hard policies in the early stages of the COVID-19 pandemic.

Indeed, these policy opinions during the pandemic has prompted us to look again at the question of what shapes the public's preferences for policy instruments (see Table 1 and Figure 1) in contrast to scholarly evidence before the pandemic which found that people tend to prefer softer instruments like nudges (Sunstein et al, 2018). This begs immediate questions – what drives the recent support for hard policies? Can they be easily explained by existing theories? Has COVID-19 prompted a deeper shift in citizens' underlying preferences for types of health policy in the longer run? What about policies in related domains like the environment and climate change?

Recent reviews in the public policy literature have considered the 'knowns and unknowns' of policy instrument choices (Capano and Howlett, 2020; Capano and Lippi, 2017), highlighting several issues including government capacity, implementation and routinisation of instrument choice. For instance, recent articles responding to policy making during the pandemic are concerned with 'national policy styles' as a means to understanding policy instruments: Capano et al (2020) set out to explore variations in the ways states have responded; Dunlop et al (2020) identify policy design and instruments as one of seven research themes for the COVID-19 era to investigate the convergence (or not) of national policy responses to the pandemic. Our focus, in contrast, is on

whether there is public support for types of policy instruments – specifically soft and hard policies – and what factors may drive these preferences.

We make two contributions to the scholarly literature. We provide the first literature review of contemporary interdisciplinary research on public support for hard versus soft policy instruments. We synthesise these findings into individual and broader factors that explain the public's preferences (section 2).[2] Our second contribution is to organise gaps in our knowledge into a research agenda (section 3), identifying research questions and arguing for greater methodological diversity to build on the limitations identified in the literature.



## 2. Review of public support for hard vs. soft policy instruments: lessons and gaps

We conducted a review of the literature, focusing on factors affecting public preferences for policy instruments, and how these preferences might change[3]. We used Scopus and Google Scholar to search for peer-reviewed articles, using the search terms 'policy preferences', 'instruments', 'tools', 'nudge', and 'public attitudes'. We focused on research published during the past five years of research and narrowed our results to those that examine public policy preferences for at least one type of policy instrument. A total of 29 articles were selected for the review through a process of agreement between two authors including snowballing. They are summarised in Table 2.

The articles were drawn from multiple disciplines including public policy and political science, psychology, and behavioural economics. They use a range of approaches

[2] As such this review is a more specific discussion on an aspect of instrument choice, public preferences, which relates to 'legitimacy' in instrument choice raised by Capano and Lippi (2017), and the role of policy feedback raised by Capano and Howlett (2020).
[3] While this is not a systematic review, we share our literature search and selection strategy for transparency

including experimental, observational, and qualitative methods. Empirical applications focused largely on health and pro-environmental behaviours. The behaviours and challenges in these policy domains are especially pertinent to the COVID-19 context: the need for collective action, the potential disjuncture between communal gains and individual costs, and the problem of intertemporal costs where action involves short run costs for long run benefits.

The literature can be organised into three strands. The first strand summarises findings on public preferences, specifically, do people prefer soft or hard policy instruments? The second strand looks at individual-level factors affecting preferences for policy instruments, including socio-demographics, traits and preferences, and behavioural factors. The third strand considers broader factors, beyond individual attributes, such as the context in which individuals receive information about policies, and country-level variables.



**2.1. Public preferences for soft versus hard policy instruments**

In contrast with very recent polling data discussed earlier, which pointed to support for harder measures to tackle COVID-19, the broad lesson from the past literature is that people prefer softer instruments. Several studies by Sunstein and colleagues (2016a, 2016b, 2018a, 2018b, 2018c) report that a majority of citizens unconditionally supported and approved of nudges in fifteen countries based on nationally representative samples. Recent evaluations, moreover, show that nudges can be cost-effective (Benartzi et al., 2017). High acceptability for softer policy instruments has often been compared to public resistance towards taxes or mandates (see Dubov and Phung, 2015; Goldin and Lawson, 2016).

Such support has been interpreted as a preference for policies that were less restrictive for personal freedom and choices. For instance, Diepeveen et al., find that "support was

generally higher for interventions perceived as less intrusive" based on a review of 200 studies of health-related behaviours (2013, p. 4). Warning labels in health education campaigns are a classic example of a soft policy instrument since they preserve liberty while altering the context for the choice; and were found to be more acceptable than harder policy instruments such as 'sin' taxes. This finding was consistent across the four health behaviours studied – diet, physical activity, alcohol consumption and smoking. Mazzocchi and colleagues also corroborate the idea there is "on average relatively lower support for more intrusive actions like bans or taxation", based on survey about healthy eating policies from five European countries, namely, Belgium, Poland, Denmark, Italy and the UK (2014, p. 286).

Similar evidence of public preferences leaning towards soft measures are reported for pro-environmental behaviours as well. Kantenbacher et al., investigated preferences across 14 types of hard and soft aviation climate policy measures (2018, p. 47). Hard measures such as limits on flights and sanctions on cruises had the least support; the most support was recorded for soft measures such as providing information about environmental impacts and developing public transport. This is in line with qualitative research on attitudes towards tourist travel, which suggests that harder regulatory approaches are perceived as imposing on individual freedoms (Higham et al., 2016). In their study of acceptance levels and preferences across 24 energy-saving strategies in China, Jia, Xu and Fan (2018) report that those relying on voluntary behaviour change (like turning off lights in unused rooms) rather than technical solutions that involve an upfront financial cost (like installing solar panels) are the most popular (Jia et al., 2018, p. 491). Thus, the broad message from past studies on preferences for health and environmental policies is that the public prefers softer approaches.

However, people's support for soft policies can be contingent on trust in policymakers and governments, and the perceived effectiveness of the policy itself. Sunstein (2016) identifies various situations that could diminish this support. Sunstein (2016) reports that people need to trust the choice architects and will oppose nudges that promote what they perceive as illicit goals or are perceived as inconsistent with the interests or values of most choosers. For example, people do not want choice architects to produce economic or other losses by using people's inertia or inattention against them; a finding which may reduce support for defaults, as an example of a soft policy instrument. Bang, Shu and Weber (2020) also report varying levels of acceptability amongst soft policy instruments, related to their perceived effectiveness and who the choice architect was. For example, nudge policy decisions that benefit the choice architect are less acceptable than those instigated for health or sustainability reasons (Bang et al., 2020, p. 18). Although this emerging empirical research focus solely on nudges, they are nonetheless illustrative of the way people evaluate policy instruments and nuance the idea of there being a preference for softer policy instruments.

**2.2. Individual-level factors**

Personal lifestyle, prior beliefs and experience, self-interest as well as concern for others, have been linked to preferences for softer policy instruments.[4] These factors have largely been measured through stated responses to questionnaires about initial attitudes and behaviours. For instance, those with pro-environmental beliefs are more likely to support all types of policy action for curbing air travel; those who are regular flyers are significantly less likely to support harder measures such as a frequent flyer tax or limits on the number of flights (Kantenbacher et al., 2018, p. 50). Individuals who have recently experienced extreme weather such as heat waves or drought "are more likely to

[4] Self-interest implies that if people try to minimize costs arising from policy, their preferences will be influenced by how the policy affects them personally

support (climate change) laws…even if it means restricting individual freedoms" (Owen et al., 2012, p. 557). In a study of carbon taxes in Europe, Umit and Schaffer (2020) find support for the idea that self-interest matters, with lower support for carbon taxes amongst people with high energy dependency (Umit and Schaffer, 2020, p. 5).

Similar findings are reported in the health domain. For example, people who report high levels of personal consumption of fast food and pre-packaged food had the least support for advertising bans and fiscal measures to promote healthy eating (Mazzocchi et al., 2014, pp 281-282). Diepeveen et al (2013) also report evidence consistent with self-interest theory, where people not engaging in the target behaviour "appear more willing to advocate interventions that restrict the behaviour of others" (Diepeveen et al., 2013, p. 7).

Political ideology has also been found to be significantly associated with preferences for policy instruments. In the USA, those with strong affiliations to the Democratic Party were found to be more likely to support laws to protect the environment (Owen et al., 2012, p. 564); and those with left-leaning political views were more likely to support government interventions for obesity including fiscal policy measures (Mazzocchi et al., 2014, p.280). Haselswerdt and Bartels (2015) similarly found that US conservatives prefer tax breaks to direct spending.

Age, gender and education have also been investigated, but findings are inconclusive and can depend on the policy instrument and issue in question. Diepeveen et al (2013, p. 7) find that older people and women are more likely to endorse hard policy instruments. They speculate that age may be related to trust in government and women may prefer stronger preventative measures since they are more likely to act as informal care providers. Kantenbacher et al (2018), in contrast, find no effects from gender, age or

employment on aviation policy. Sunstein, Reisch and Rauber (2018) also suggest that the significance of demographic characteristics can vary with the policy instrument.

Women are in general more likely to support nudges than men, although the authors suggest this may be more to do with the particular goals of the nudges they surveyed (such as heath and pro-environmental outcomes). They report nuanced effects from education, with more education associated with higher approval for government-mandated information campaigns, but lower approval for subliminal advertising; suggesting that the more educated find information as a regulatory tool more acceptable (Sunstein et al., 2018, p. 11). Similarly, Mazzochi et al (2014) report some significant associations between gender, age, and education and policy instrument preferences, but these are of low magnitude and vary with the policy instrument in question. For example, men are more likely to support soft policies around information for healthy eating compared to women, but there are no gender effects relating to fiscal measures or advertising bans.

**2.3 Broader factors: choice and country context**

Sunstein (2016) warns against the notion that people have dogmatic views one way or another about the use of nudges. Rather, public support "turns on whether they approve of the purposes and effects of particular nudges" (Sunstein, 2016, p. 118). This in turn depends on what information is available to them at the time they are being asked to express their preferences. The literature has begun to explore how types of information, the way information is framed, and how the policy choices are presented, can affect support towards policy instruments.

Haselswerdt and Bartels (2015) investigate support for different types of welfare policy instruments. They test the way information context affects preferences, by randomly assigning whether respondents receive information on the costs of a program. They

report that having this information does lower support, corroborating the notion of self-interest affecting policy instrument preferences. They go on to highlight another contextual factor playing a role in policy instrument evaluations in the form of status quo bias, with respondents demonstrating "a preference for familiar forms of government intervention" (Haselswerdt and Bartels, 2015, p. 617). Bang, Shu and Weber (2020) also report evidence that people, when presented with repeated choices, attempt to stay consistent with their response to the first frame. These studies suggest that the evidence may reflect anchoring, status quo bias or the tendency to mitigate cognitive dissonance.

But whether these tendencies induce stability in preferences for types of policy instruments is largely unknown. Indeed, perhaps one of the most under-attended questions is how preferences for policies change over time. Diepeveen et al (2013), for instance, suggests support for a policy instrument may grow after implementation stage, since the smoking ban was considered more acceptable after it was implemented in the UK. Counterexamples exist, however, where hard policy instruments have grown less popular after their introduction such as the 'fat tax' in Denmark (Bødker et al., 2015), and the 'bedroom tax' in the UK (Gibb, 2015). The reliance on cross-sectional surveys and the lack of longitudinal research means there is little to explain to what extent and how preferences within a political system might shift as time goes on within an individual across time, for example through policy learning or feedback loops.

A number of studies confirm the idea that the framing of policy instruments – how they are presented to the public – matters for preferences. One example of framing is presenting the policy as having an effect on the wider public (the third-person perspective, referring to 'people'), or the individual (the second-person perspective, referring to 'you'). Cornwell and Krantz (2014) find that fiscal proposals garner more support when they are framed in the third-person perspective, and this applied across

four policy domains covering fuel taxes, criminal penalties, savings incentives, and tax incentives to encourage community service.

Frames may affect different individuals differently, making it difficult to generalise. For example, in their study of US respondents, Jung and Meller (2016) find that more 'empathetic' respondents were more likely to favour nudges overall and responded more positively when nudges were framed as having societal effects. Conversely, participants identified as 'individualists' were unaffected by frames and more likely to be opposed to nudges overall.[5] Although, this study focus on types of soft instruments, particularly nudges, rather than comparing soft and hard policy instruments, the findings may be illustrative of factors that can affect preferences for policy instruments more generally.

Davidai and Shafir (2018) investigate through a series of experiments whether the presentation of softer policy instruments alongside harder policy instruments when a set of choices is presented, affects people's evaluations and preferences. Survey respondents were given information about changing defaults in order to change financial behaviours (including health insurance and retirement savings). They find that "attitudes are malleable and can be influenced by the method of evaluation. whether policies are evaluated separately or jointly" (Davidai and Shafir, 2018, p. 13). The type of policy also matters, with non-deliberative nudges found to be relatively appealing when presented and evaluated separately than when they are presented alongside measures that involved more deliberation. The framing of the policy instrument with or without alternatives may be particularly important where the individual has milder preferences to begin with or knows less about the alternative policies that they might otherwise use as a benchmark for their evaluations. Similarly, Hagmann et al (2019) consider attitudes when nudges are presented jointly with harder policy instruments to address climate change and find that

[5] Jung and Meller (2016) and other scholars distinguish between nudges that target system 1 and system 2, but for the purposes of this article it is the preference for nudges in general that is relevant.

the availability of a green nudge reduces support for a carbon tax. These findings, too, suggest that preferences may be flexible and depend on how a policy instrument is framed, and what alternatives are included in a choice set.

Apart from the choice context, an emerging set of cross-country comparison highlight that public attitudes vary across nations, suggesting that country-level context impacts preferences (Higham et al., 2016). Asked to consider policy options to address obesity, Mazzocchi et al (2014) find that Belgian respondents supported advertising bans more than British respondents; and Danish respondents favoured fiscal measures more than British respondents. These descriptive findings are not explained in detail, although the authors assert that "policy preferences vary across cultures and over time" (Mazzocchi et al., 2014, p. 269). Hagman et al (2015) report that public opinion towards nudges was more favourable amongst Swedish respondents, with 73% finding them acceptable on average, compared to 66% of US respondents. This is attributed to the contrasting norms embodied by Sweden's welfare state and its emphasis on "collective and uniform solutions", and discourse in the US which emphasises more individualistic values and the freedom of choice (Hagman et al., 2015, p. 459).

Some studies attempt to uncover differing levels of support for nudges by groups of countries. Sunstein et al. (2018) contrast industrialised Western democracies and some BRICS nations with less nudge-enthusiastic countries comprising Denmark, Japan and Hungary. They speculate that varying levels of trust in government may account for differences in support for nudge instruments. A similar argument is put forward by Umit and Schaffer (2020) who find political trust and efficacy are positively associated with harder carbon policy measures. As neither study compares soft and hard policy measures while assessing the interaction with political trust, it is unclear whether it operates consistently in support for any government action, or whether trust is particularly

important for supporting some policy instruments, in some domains. These explanations imply, more broadly, that the support for hard versus soft policies can vary by political culture. However, measures of political culture such as trust and ideology are not always comparable across studies or even within cross-country studies (Sunstein et al., 2018, p. 7).

**3. Directions for future research**

A review of the past evidence, especially from the health and the environmental policy domains, suggests that the public has preferred softer policy measures like nudges to harder interventions. When we examined how studies have explained what drives support for hard versus soft policies, scholars have pointed to the influence of many individual, contextual, and country-level factors. Indeed, this body of literature is still nascent, relatively sparse and contains several inconsistent findings about the role of different factors and has a number of outstanding gaps. While it employs several methodological approaches, most studies rely on stated responses to survey questionnaires and interviews.

We identify three promising avenues for future research to unpack what drives people's preferences for hard versus soft public policies (Table 2): first, probing how and when individual-level versus contextual factors matter (especially the role of behavioural biases and attitudes); second, how preferences for hard versus soft policies evolve over time; and third, if and when there is policy preference spillovers within and between policy domains, including the role of shocks like COVID-19.

First, we turn to the need for research to unpack how and when individual-level versus contextual factors matter (especially the role of economic preferences and attitudes). Our findings highlighted that people are more likely to support nudges when they are in their

self-interest (e.g., it is cheaper to do so), or have prior attitudes and personal experiences congruent with the issue at hand (e.g., have pro-environmental beliefs, and if the nudge is aligned with past experiences and behaviour). There is less clarity about whether preferences for policies differ systematically by standard attributes like age, gender, income and educational background. The small set of studies modifying the choice context in which preferences are elicited show that preferences might be malleable (e.g., research on framing), but that they may also exhibit status quo bias, suggesting some resistance to change.

Some important research gaps here are the lack of empirical evidence from across countries about how behavioural biases (e.g., status quo bias, loss aversion, present bias), economic preferences (e.g., trust, social, time and risk preferences), psychological attributes and attitudes (e.g., Big-5 personality traits, fatalism), non-cognitive abilities (e.g. grit, self-efficacy), and emotions or affect (e.g. fear, anger, optimism) influence preferences for hard versus soft policies. Another important gap is the need for greater clarity about if and how basic socio-demographic factors matter, given the mixed findings so far. The literature is conspicuously silent about the role of socio-economic status (which ought to consider class and wealth rather than just income) and ethnicity (such as by race, region, and caste). Apart from "trust", other country-level cultural and political dimensions which have not been studied include socio-cultural beliefs, norms, religion and values, and historical and current experiences of colonialism, war, and extreme weather and health events (e.g., in Acemoglu et al., 2001).

One way to address this gap is to collect data from different countries about public preferences for hard and soft policies along with pre-validated indicators about individual attributes, including affect, attitudes and values, such as those identified in the Global Preferences Survey (Falk et al., 2018). The survey reveals substantial heterogeneity in

preferences across countries; but even larger within-country heterogeneity, relating preferences to biogeographic and cultural variables, such as agricultural suitability, language structure, and religion, as well as from economic outcomes and behaviours.

Another avenue of research is to elicit more robust metrics on public preferences, given the reliance on primary stated responses to surveys in existing literature. This could be achieved by trialling preference valuation methods, including contingent and discrete choice approaches. These methods have long been applied to valuing policy preferences in health and environmental policy (de Bekker Grob et al., 2014; Hoyos, 2010). Such approaches could serve both to validate existing insights from stated preference studies, and to shed new insights into other metrics such as willingness to pay for or accept changes to different public policies. They could be combined with controlled experimentation to unpack how behavioural biases, like status quo bias, affect preferences for soft versus hard public policies. These can also be employed to test how framing information in certain ways may have systematic impacts on preferences for hard versus soft policies.

Second, more research is needed to explore how these public preferences evolve over time both within and across individuals and countries, along with the related question of what factors that might be responsible for changes over time. As noted by Diepeveen et al (2013, p. 8), the "stability of public attitudes…is little studied", since most research notes a range of possibilities rather than definitive conclusions based on empirical data. While there are some examples of hard policies being unpopular after their introduction (e.g., Denmark's 'fat' tax and the UK's bedroom tax), in other cases bans may have become more popular after they were introduced (e.g., the UK's smoking ban). The latter insight aligns with the emerging body of evidence documenting 'hysteresis' i.e., the tendency for policies to affect household behaviours even when they are no longer in

place (Costa and Gerrard, 2018). Similarly, other studies have pointed out that nudges can have persistent effects on habitual energy behaviours after they are removed (Allcott and Rogers, 2014). It is also in line with evidence reviewed above that personal past experiences matter and can shift people's preferences towards different types of policies.

An important gap is the lack of longitudinal and repeated cross-sectional data, which can help explain how policy preferences evolve over time. Addressing this gap will enable learning on the stability of preferences for hard versus soft policies either within the individual across time, or at least at a regional level (e.g., within and across countries). Despite its limitations, there are some lessons which could be learnt from the literature studying temporal stability of time and risk preferences. For instance, Chuang and Schechter (2015) use panel data from rural Paraguay over almost a decade to find that social preference survey questions are relatively stable but note that experimental measures are not. Similarly, Meier and Sprenger (2015) present evidence from a large field study conducted over two years, with around 1,400 individuals using incentivized intertemporal choice experiments. They found that although most people's time preferences were unchanged over the study period, there were shifts amongst other individuals (which were unrelated to socio-demographic characteristics). While these studies examine individual attributes rather than policy preferences, they nevertheless point to the value of methodological approaches like longitudinal surveys that can be used to both study if policy preferences shift within the individual, but also ways to elicit the underlying mechanisms for such changes.

The question of how stable people's preferences are for hard versus soft policies is especially important to understand the long-term effects of unexpected shocks like COVID-19. Findings from our review shows that self-interest and first-hand experience can influence preferences for policy instruments, which suggests that whether people

support harder (or softer) measures may depend on to extent to which they can benefit and have benefitted from such measures being in place. For instance, it is possible that an increased preference for soft policies may emerge if compliance with (hard) lockdown measures have negative psychological effects like post-traumatic stress symptoms, confusion, and anger (Brooks et al., 2020). The influence of the public's experience with lockdown and social distancing may also depend on how effective these policies were perceived to be in curbing the pandemic, how they were paired with other policy actions within the health domain (e.g., contact tracing and testing), how particular populations fared (e.g. children, non-white minorities and older populations) or even other policies in related domains (e.g. wage protections, mental health support).

Third, building on the need to investigate the temporal stability for types of policies in a given domain, future research can also examine if and when there is policy preference spillovers within and between different domains and issues. In particular, we see significant potential for work at the intersection of health and environmental policy. It is unclear whether and how people's experiences and understanding from COVID-19 might affect preferences for types of policies in other domains. For instance, the lockdown has directly affected work-related travel and commuting behaviours for some groups, which in turn has improved air quality. This direct experience could have saved time and costs for both employers and employees, which may shift preferences towards harder policy instruments that aim to influence work-related travel behaviours and environmental quality. Along these lines, Kahn et al (2020) found that residents of Chinese cities with high pollution sensitive populations, who experienced sharply improved air quality due to lockdowns during the pandemic, have increased their online discussions focused on environmental protection, and local officials are incorporating "green" industrial subsidies into post-COVID stimulus policies.

The swift and interventionist responses to COVID-19 may also enable decision action on climate change through growing preferences for harder climate and biodiversity policies like taxes and regulation. For instance, Shreedhar and Mourato (2020) found that people expressed higher support for commercial wildlife trade bans – a 'hard' conservation policy tool with wide-ranging implications – when they were informed that infectious zoonotic diseases, of which COVID-19 may be one, are linked to anthropogenic environmental change. Apart from enabling a swift reaction to other crises, experiencing the COVID-19 pandemic may lead to greater awareness, which in turn could result in policy spillovers. For instance, Rousseau and Deschacht (2020) found that the pandemic led to a positive shift in public awareness of and attention to nature and biodiversity-related topics (e.g., birds, forest, nature) in the UK. As before, studies on policy preference spillovers within and across domains could be conducted using either cross-sectional or longitudinal surveys if we want to examine how persistence spillover effects are. They can also incorporate experimental and valuation techniques as previously suggested.



**Table 2**

***Directions for future research in understanding what drives people's preferences for hard versus soft public policies.***

| What we know | Gaps in our understanding | Future Research Avenues |
|---|---|---|
| | *How and when individual-level and contextual factors matter?* | |

| | | |
|---|---|---|
| Support for policies is determined by:<br>a. Self-interest<br>b. Antecedent preferences<br>c. Prior policy and personal experience<br>d. Framing of policies<br>e. Socio-demographics (mixed evidence) | We need greater clarity on:<br>a. Systematic differences by socio-demographics.<br>b. Broader cultural and political dimensions like religion, values and historical experiences.<br>c. Cross-sectional evidence regarding<br>• behavioural biases<br>• economic preferences<br>• psychological attitudes<br>• non-cognitive abilities | Scholars studying policy preferences should<br>• Collect cross-sectional data on public preferences for hard and soft policies along with pre-validated indicators about individual attributes contextual indicators.<br>• Trial preference valuation methods combined with controlled experimentation techniques. |
| *How preferences for hard and soft policies evolve over time?* | | |
| a. Mixed evidence on the public palatability towards public policies (e.g., taxes, bans).<br>b. Stability of public attitudes are unclear. | The temporal preference (in)stability towards hard versus soft public policies. | Scholars studying policy preferences should<br>• Design longitudinal or repeated cross-sectional studies.<br>• Elicit mechanisms underlying preference shifts, if any. |
| *Are there policy preference spillovers between different domains?* | | |
| Scarce and mixed evidence on the | Policy preference spillovers | A systematic study of hard versus soft |

| | | |
|---|---|---|
| direction of behavioural spillovers. | arising from the experience of a particular event or public policy in the same or different domain. | policy instruments in causing policy preference spillovers within and between different domains and issues; for e.g., health and environment. |

**4. Conclusions**

In this article, we aimed to explore the academic literature on public support for hard versus soft policies, and what factors drive these policy preferences. Indeed, much of the extant scholarly evidence has found that people tend to prefer softer instruments like nudges (for e.g., Sunstein et al., 2018). This seems to contrast with the emerging evidence from several opinion polls throughout the Covid-19 pandemic. A majority of the public - across numerous countries - have supported hard policy instruments including laws and physical restrictions in the pandemic response.

In order to explain this apparent paradox, the question of what shapes the public's preferences for policy instruments is crucial. Notwithstanding the limitations of our narrative literature review, including the lack of representation across all policy instrument types and domains, we found that both individual-level attributes, as well as choice- and country-level factors, are influential. These factors offer some explanation of for the marked preferences for hard policies. For instance, studies have pointed to the role of perceived effectiveness and past policy experiences (Bang, Shu and Weber, 2020).

However, our review also highlights how narrow the current evidence base is, and numerous gaps in the literature. For instance, few studies systematically examine if emotions, like fear and risk perception, or indeed biases, attitudes, norms and other behavioural factors affect public support for hard versus soft policies (Mækelæ et al.

2020). We synthesise the existing findings and craft an agenda for future scholarship around three goals, to understand: how and when individual-level and contextual factors matter; how preferences for hard and soft policies evolve over time; and lastly if there are policy preference spillovers between different domains.

In sum, while past research shows a tendency for the public to support softer, behavioural public policy measures, public preferences depend on a wide range of factors including trust, framing, and perceived effectiveness, spanning individual and contextual factors. These factors collectively highlight the need for subtlety in unpacking preferences for soft and hard instruments; and offer reasons why the apparent appetite for hard policy instruments during the COVID-19 pandemic may not be the paradox it first seems. More evidence is needed about how stable people's preferences to types of policy instruments are, and what factors underpin these preferences, how public support for policies evolves over time, and how it may spillover across different domains. Future research could focus on these questions to systematically study what drives people's support for hard versus soft public policies.

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## Appendix

### Table A1: List of articles reviewed[i]

| # | Author (Year) *Title* | Hard vs soft policies? | Results | Methods |
|---|---|---|---|---|
| 1 | Reisch, Sunstein and Dwozdz (2017) *Beyond carrots and sticks: Europeans support health nudges* | Yes; public support for different kinds of nudges were compared. | (1) Broad public support for nudges by a majority of people, varying by level of intrusiveness of the nudge policy and the type of behaviour being targeted.<br>(2) Age (+), males (-), political valence (populists and liberals lower than conservatives)<br>(3) Intercountry differences found (Germany, Hungary and Denmark differ significantly from others) | Survey<br><br>N=1000 nationally representative samples from 6 countries: Denmark, Hungary, Germany, Italy, France and the UK administered using a CAWI (Computer Assisted Web Survey) omnibus survey.<br><br>DV = stated |
| 2 | Benartzi, Beshears, Milkman, Sunstein, Thaler, Shankar, Tucker-Ray, Congdon Galing (2017)<br>*Should government invest more in nudging?* | Yes; calculates the Impact to Cost Ratio (ICR) of nudges and traditional instruments like taxes and financial inducements. | Nudges have the highest ICR (>5). Authors put forward the prescriptive notion for increased use of nudes either by themselves or in conjunction with traditional policies (e.g. tax, financial incentives).<br>N/A<br>N/A | Systematic review<br><br>n=N/A (included top publications in 3 leading journals in the domain of general interests, economics excluding finance, medicine and psychology (that publishes only review articles) between 2000-2015) (for detailed search strategy see Benartzi et al., pp 1042-1043, 2017).<br><br>DV=Real Monetary amounts |
| 3 | Petrescu, Hollands, Couturier, Ng, Marteau (2016)<br>*Public acceptability in the UK and USA of nudging to reduce obesity: the example of reducing sugar-sweetened beverages consumption* | Yes; compares the public acceptability of three different nudges, taxes and education (thinks). | Nudges are clearly favoured over taxation policies but are less favoured compared to educative policies (thinks).<br>Consciousness about nudges (+), males (-), age (+), education (medium (-), high (+)), ethnicity (+), trust in government (+).<br>N/A | Survey experiment<br><br>N= 1093 respondents in UK recruited via Survey Sampling International and 1082 respondents in USA recruited via MTurk (representative sampling frames used).<br><br>DV= stated |
| 4 | Higham, Cohen, Cavaliere, | Yes; compares respondents' | Shows a divergence in public attitudes and palpability | Semi-structured interviews |

| # | Author (Year)<br>*Title* | Hard vs soft policies? | Results | Methods |
|---|---|---|---|---|
| | Reis, Finkler (2016)<br>*Climate change, tourist air travel and radical Emissions reduction* | willingness to accommodate voluntary versus regulatory measures for air travel emissions reductions. | towards nudges, social marketing and harder paternalistic measures. While respondents in UK, Germany and Australia favour nudges and social marketing, Norwegians prefer harder paternalistic measures through taxation over softer ones.<br>N/A<br>Demand for structures of provision to change, cross-subsidisation, research and adopt technologies (+), within and between sample divergence in attitudes. | N= 68 respondents (Norway 8 females: 7 males; UK 8:7; Germany 8:10; Australia 10:10) in age range 18-67 recruited using convenience and snowball sampling techniques.<br><br>DV=stated |
| 5 | Carter (2015)<br>*Making the blue zones: neoliberalism and nudges in public health promotion* | No; evaluates the ideological and political origins of a specific programme and recommends using nudges. | The author analyses the Blue Zones Programme (BZP) launched as part of its healthiest state initiative (HIS) in 2016. This BZP marked a clear shift towards neoliberal governmentality, the idea that people can "perceive, problematize and govern their own health" (p375, 2015). However, whereas the general idea of neoliberal governmentality is based on a policy neoliberalism attitudes, the BZP takes a deep neoliberalism perspective in that it embraces "technologies of the self" (p379, 2015) i.e. relies on libertarian paternalism to influence the choice of the agents by bringing in market rationality in their decision-making processes.<br>N/A<br>N/A | Critical Discourse Analysis (CDA)<br><br>n= N/A; resources drawn from conventional reports., books, articles and unconventional social media and off the internet findings.<br><br>DV=N/A. |
| 6 | Vlaev, Dolan, King and Darzi (2016)<br>*The theory and the practise of "nudging": changing health behaviours* | No; reviews evidence and the theoretical basis for nudges as a tool to change health behaviour. | The authors find evidence in the favour of efficacy of nudges. They suggest that nudges should be used as complements rather than substitutes to other interventions: legislation and taxation, pertinently.<br>Socio-economic status for antismoking campaigns (low and middle +).<br>N/A | Mixed-methods approach (including an extensive literature review which were refined through focus group testing and interviews with senior policy makers and behavioural scientists).<br>N=N/A<br>DV= stated |
| 7 | Sunstein (2016)<br>*People prefer system 2 nudges* | Yes; compares System 1 (S1) versus System 2 (S2) nudges. | Yes, the author finds growing evidence in favour of S2 nudges. | Survey |

| # | Author (Year)<br>*Title* | Hard vs soft policies? | Results | Methods |
|---|---|---|---|---|
| | *(kind of)* | | Partisan affiliations (+) matter as democrats are more inclined to favour system 1 nudges in the contexts of green energy and water conservation while democrats and republicans prefer S2 nudges to reduce abortions<br>Within-subjects differences noted in acceptability (at least one third prefer S2 nudges). Preferences are not always stable; for example, framing matters, as when provided information in a neutral condition people tend to prefer S2 nudges more than S1 nudges. With additional information on effectiveness, preferences shift towards S1 nudges. | N= (>) 2800 Americans administered on Sampling Survey International (followed up with 400 surveys on MTurk).<br><br>DV=stated |
| 8 | Junghans, Cheung and De Ridder (2015)<br>*Under consumers' scrutiny – an investigation into consumers' attitudes and concerns about nudging in the realm of health behaviour* | No; examines consumers' attitudes to nudging in the realm of health behaviour. | The authors find evidence of UK consumer's support of nudges in general and in the health domain specifically.<br>N/A<br>While most consumers included in the study are largely unaware of the presence of nudges, on being provided with additional information, these people are highly in favour of the nudges. While it does not matter who delivers the nudge, the uptake and the approval of the nudge depends on whether the nudge is aligned to the personal goals of the consumers and is set out with 'good' intentions. | Semi-structured interviews.<br><br>N=21 interviewees (excluding 1 for English proficiency reasons).<br><br>DV= stated |
| 9 | Davidai and Shafir (2018)<br>*Are nudges getting a fair shot? Joint versus separate evaluation* | Yes; uses different framing to evaluate people's preferences for policy tools. | In a joint evaluation, non-deliberative nudges are less likely to be endorsed relative to traditional instruments; whereas in a separate evaluation nudges are considered less paternalistic.<br>N/A<br>N/A | Three Survey Experiments<br><br>N= 113 and 130 respondents (Study 1); 300 respondents (Study 2) and 123 respondents (Study 3) recruited via Mturk.<br><br>DV=stated |
| 10 | Sunstein, Reisch and Rauber (2017)<br>*A worldwide consensus on nudging? Not quite, but almost* | Yes; public support for different kind of nudges were compared. | Broad public support for nudges by a majority of people.<br>Males (-), age (-) as older approve less intrusive, government mandates, education (+) as high approval for governmentally mandated information nudges, political valence (-ve for | Survey<br><br>N=7927 (unweighted) respondents recruited via Qualtrics from Australia, Brazil, Canada, |

| # | Author (Year)<br>*Title* | Hard vs soft policies? | Results | Methods |
|---|---|---|---|---|
| | | | conservatives over liberals).<br>Country-specific effects presents; three clusters identified: a) Western countries (liberal democracies) where a majority support the nudges as long as they are applied in the best interest of the citizens and they align with the respondents' goals (b) Confucian Asian countries that approve of all nudges irrespective of anything else, and (c) Outliers (like Japan, Denmark and Hungary) which do not have majority approval rates for the nudges. | China, Japan, Russia, South Africa and South Korea.<br><br>DV=stated |
| 11 | Sunstein (2016)<br>*Do people like nudges?* | It assesses the acceptability of nudges and then compares nudges with mandates in terms of their public support. | A majority of people tend to prefer nudges in general and over mandates. The nudges are favoured as long as they are not illicit, and they match or align with the interests of the respondents.<br>The support for nudges, contingent on its legitimacy, extends unanimously across partisan affiliations.<br>There arises reactance to nudges and some defaults fail to work. They find that S2 nudges are more preferred than S1 nudges while informing people of nudges leads to no change in efficacy. | Survey<br><br>N= 563 respondents using Sample Survey International to test acceptability of nudges; 309 Americans recruited via Mturk to test preferences for nudges versus mandates.<br><br>DV= stated |
| 12 | Umit and Schaffer (2020)<br>*Attitudes towards carbon taxes across Europe: The role of perceived uncertainty and self-interest* | Partly comparative survey but focus on single hard policy instrument, carbon taxes. | Widespread aversion to carbon taxes in Europe.<br>Political trust and political efficacy (+); self-interest, for example, energy dependence (-).<br>Cross-country differences are noted for aversion to carbon taxes. In countries that favour taxes, such policies are already existent. | Survey<br><br>N=44,387 respondents in Round 8 of the European Social Survey across 23 countries.<br><br>DV= stated |
| 13 | Dubov and Phung (2015)<br>*Nudges or mandates? The ethics of mandatory flu vaccination* | No; the article reviews the ethics of mandatory flu shots and recommends nudges as a means to achieve behavioural change. | The authors review historical and medical evidence related to mandatory flu shots in America in light of the American healthy policy to achieve 90 percent vaccination rate by 2020.<br>They find that people (nurses included) oppose mandates on the grounds that it violates a person rights to refuse unwanted treatment and their right to informed consent.<br>Suggestive of prescribing nudges to exploit cognitive biases.<br>N/A<br>N/A | Review article<br><br>n= N/A<br><br>DV=N/A |
| 14 | Sunstein, Reisch and Kaiser (2019)<br>*Trusting Nudges? Lessons from an international survey* | Yes; public support for different kind of nudges were compared. | Nudges enjoy a majority support in these countries.<br>Age (+), gender (+), trust in institutions (+), higher formal education (-), city dwellers over villages (+), number of children (+), environmental concern (+) and belief in markets (-).<br>Level of state intervention in countries (-), framing (+ if nudge is targeted to others than one's self), cross-country | Survey with randomised order of nudges<br><br>N= 1002 (Belgium), 966 (Denmark), 1535 (Germany), 1017 (South Korea) and 1012 (USA) representative respondents recruited using the CAWI omnibus survey. |

| # | Author (Year)<br>*Title* | Hard vs soft policies? | Results | Methods |
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| | | | differences noted as well. | DV= stated |
| 15 | Yung and Mellers (2016)<br>*American attitudes towards nudges* | Yes, within soft instruments – compares system 1 and system 2 nudges. Support for nudges also considered. | Support for nudges found except for defaults, visual illusions and one-click donations (in study 1) and defaults (in study 2).<br>Individual dispositions matter; for example, empathy (+), individualism (-), conservativism (-), desire for control (- for S1 nudges). Perceptions matter (S1 more paternalistic over S2).<br>Framing effects insignificant, likeability of company policies (+). | Survey<br><br>N=250 respondents (Study 1) and 800 respondents (Study 2) recruited via Qualtrics.<br><br>DV=stated |
| 16 | Diepeveen, Ling, Suhrcke, Roland and Marteau (2013)<br>*Public acceptability of government intervention to change health related behaviours: A systematic review and narrative synthesis* | Yes – across<br>three types of policy covering soft and hard instruments. | Support was generally higher for interventions perceived as less intrusive.<br>Females (+), age (+ for restrictive measures), individual dispositions (+ for non-smokers and non-drinkers),<br>Stage of policy implementation (+), framing (+ when targeted individually rather than group norms), cross-country differences notes (+ for restrictive policies in authoritarian regimes) | Literature Review and Narrative Synthesis<br><br>n=200 studies met inclusion criteria from Europe, North America, Australia and New Zealand studying interventions related to tobacco, alcohol, diet and physical activity.<br><br>DV=stated (80 percent studies used survey-based methods, while only 5 percent used experimental designs). |
| 17 | Mazzocchi, Cagnone, Bech-Larsen, Niedźwiedzka, Saba, Shankar, Vierbeke and Traill (2015)<br>*What is the public appetite for healthy eating policies? Evidence from a cross-European survey* | Yes – across 5 European countries and 20 policy tools spanning softer and harder instruments. | More support for softer measures than harder measures. Amongst harder instruments, more support for regulations and subsidies than taxes and bans.<br>Attitudinal drivers (+ for all policies) like health risk concerns credence and nutritional beliefs about eating; lifestyle and behaviour like physical activity (- for bans and + for information measures); financial conditions (+ for all policies); females, age and education (- for all but bans); political ideology (+ for left leaning ideology).<br>Cross-country differences noted across policies. | Survey<br><br>N= 3003 respondents (600 from each country except UK which had 603) recruited using CAWI survey from United Kingdom, Belgium, Denmark, Poland and Italy.<br><br>DV= stated |
| 18 | Goldin and Lawson (2016)<br>*Defaults, mandates and taxes: policy design with active and passive decision makers* | Yes; a theoretical model is used to assess citizens' responsiveness to nudges, mandates and taxes. | The authors use a decision-making model to understand if policy instruments are better than one another. They find that defaults are better than mandates unless the active choosers (who decide for themselves) are making sub-optimal choices for their selves. Furthermore, they also find that a combination of defaults with taxes is better than each individually and preferred to the mandates.<br>N/A<br>N/A | Theoretical modelling<br><br>N=N/A<br><br>DV= positive model with predictive conditions. |

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| 19 | Kantenbacher, Hanna, Cohen, Miller and Scarles (2018)<br>*Public attitudes about climate policy options for aviation* | Yes – 14 policies on a spectrum of hard and soft aviation climate policy measures. | Least support for hard measures such as limits on flights and sanctions on cruises; most support for soft measures such as financial incentives for UK holidays, and information about environmental impacts.<br>Individual dispositions; for example, first degree (+), flyer (-), pro-environmental beliefs (+) and belief that NGOs have a responsibility for addressing climate change (+).<br>N/A | Survey<br><br>N=2066 British respondents using leading UK third party organisation, representative random sample drawn.<br><br>DV= stated |
| 20 | Owen, Conover, Videras and Wu (2012)<br>*Heat waves, droughts, and preferences for environmental policy* | No – focus on hard policy measures including environmental regulation and laws. | Individuals who have recently experienced extreme weather (heat waves or droughts) are more likely to laws to protect the environment.<br>Environmentalist attitudes (+), education (-), political party identification (+)<br>Experience of extreme weather events; for example, heat waves (+), droughts (+). Geographical features like individuals from census tracts with higher vacancy rates (+). | Survey<br><br>N= 2500 (approximate) respondents recruited by Knowledge Networks from the American National Election Studies (ANES) panel in the United States between 2008-2009 using random digit dialling.<br><br>DV= stated |
| 21 | Hagman, Andersson, Västfjäll, Tinghog (2015)<br>*Public views on policies* | Partly – survey of 2 countries but focuses on soft policy measures. Nudges classified as pro-self and pro-social. | Acceptance for nudges was generally high. Paradoxically, nudges were still seen as intrusive to freedom of choice. Pro-self nudges had higher acceptability than pro-social nudges.<br>Individualism (-) on support, analytical thinking (-) on intrusiveness.<br>Cross-country differences notes (Swedish respondents more supportive of nudges than US citizens). | Survey<br><br>N=514 (Sweden) and 438 (USA) respondents recruited via CMA Research in Sweden and Decision Research in Eugene Oregon in USA.<br><br>DV= stated preferences. |
| 22 | Haselswerdt and Bartels (2015)<br>*Public opinion, policy tools and the status quo: Evidence from a survey experiment* | Partly – contrasting public opinion on two hard policy tools – taxation and spending, with a focus on welfare policy delivery. | Tax breaks are favoured over direct spending.<br>Liberalism (+), females (-), parents of young children (+).<br>Framing effects; for example, policy status quo matters such as familiarity with policy (+), ideology such as conservatives (+) over liberals, information (-). | Survey experiment<br><br>N=1000 American respondents recruited from the 2012 Cooperative Congressional Election Study (CCES).<br><br>DV= stated |
| 23 | Howlett and Capano (2020)<br>*The knowns and unknowns of policy instrument analysis: Policy trends and the current research* | No – more general discussion of policy instruments and how policymakers choose between different available | Six areas of 'knowns' identified, including basic typologies of policy tools and motivations for policy makers choosing amongst them<br>N/A | Literature Review |

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| | *agenda on policy mixes* | instruments. | Mentions policy taker behaviour and compliance, which we would concur with. Also mentions the impact of sequencing and speed considerations – the dynamics of time in policy instrument choice – but not really from the point of view of public preferences. | |
| 24 | Capano and Lippi (2017)<br>*How policy instruments are chosen? Patterns of decision makers' choices* | No – more general discussion of policy instruments and how policymakers choose between different available instruments. | Expand on the issue of public opinion as an input to policy maker choices, with public opinion potentially affecting the legitimacy and effectiveness of policy instrument choice.<br>Acceptability and public preferences as a mediating factor for policy instrument choice.<br>N/A | Literature Review |
| 25 | Cornwell and Krantz (2014)<br>*Public policy for thee, but not for me: Varying the grammatical person of public policy justifications influences their support* | Yes, nudges were framed differently either in the second- or third-person plural. | The support for policies is more when the justification is framed and points to others in general than the individual.<br>In Study 1 (third person effects): Having beliefs about unintended policy consequences and achieving policy goals (+) with support. In Study 2 (replication study with more controls and increased policy options), the above correlations (+) hold. Agency (-) with policy support in the second person framing condition.<br>The results find evidence in favour of third person effects in the literature of nudging. | Survey Experiment<br><br>N= 86 (Study 1) respondents recruited via Mturk; 300 (Study 2) recruited via Mturk.<br><br>DV= stated |
| 26 | Felson, Castelo and Reiner (2013)<br>*Decisional enhancement and autonomy: Public attitudes towards overt and covert nudges* | Yes, overt and covert nudges were compared and public support for them was tested. | Respondents tend to prefer conscious decisional enhancement i.e. overt nudges are preferred over covert nudges.<br>Individual dispositions matter; for example, those who seek help favour decisional enhancement (+). Legitimacy of the program (+) for support.<br>N/A | Survey Experiment<br><br>N= 2775 respondents from USA and Canada recruited using Mturk.<br><br>DV= stated |
| 27 | Moseley and Stoker (2015)<br>*Putting public policy defaults to the test: the case of organ donation registration* | Yes, different kinds of defaults (nudges) to promote organ donation registration were compared to test public support for these nudges. | Opt-out and neutral defaults led to significantly more donor registrations compared to the opt-in defaults. However, the attitudinal data reflected a preference for the neutral defaults.<br>N/A<br>N/A | Survey Experiment<br><br>N=4005 British respondents recruited using Ipsos Mori panel.<br><br>DV= stated |

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| 28 | Bang, Shu and Weber (2018)<br>*The success of perceived effectiveness on the acceptability of choice architecture* | Yes, level of transparency was increased in different choice architecture interventions to see effect on perceived effectiveness and acceptability. | In Study 1: Perceived effectiveness was larger for others than one's own self. Higher perceived effectiveness explained higher acceptability of the choice architectural manipulation. N/A<br>In Study 2: Framing effects found; for example, riskier option chosen significantly more in loss frame. Perceived intentions also differed by source; for example, government received more responses as its 'sustainability' motive was trusted more relative to airline companies. Third party sources (-) saw lower effect compared to friends. | Survey<br><br>N=249 (Study 1) and 226 (Study 2) respondents recruited using Mturk.<br><br>DV= stated |
| 29 | Dunlop, Ongaro and Baker (2020)<br>*Researching Covid-19: A research agenda for public policy and administrative scholars* | No, the paper outlines a research agenda that must be followed in any public policy administration discourse; of the seven broad themes identified, one includes the design of policies and the instruments. | The authors identify seven broad themes that they urge public policy makers to consider when designing policies relevant to social problems that we face; these include policy design and instruments, policy learning, public service and its publics, organisational capacity, public governance, administrative traditions and public sector reforms in multi-level governance. The themes identified are, by no means, prescriptive and are a tool to help policymakers in thinking out loud in their considerations. | Thematic analysis<br><br>N= N/A<br><br>DV= N/A |

Notes: (i) Col 2- Hard vs soft policies: This summarizes the study with a simple Yes/No with details of what was being compared. (ii) Col3 – Results: These are organised as follows: (1) What do people prefer? (2) Individual level factors – demographics, attitudes and experiences, and (3) Broader factors including context for making choice (includes information and framing) and country level factors. (iii) Col4 – Methods: These are organised as follows: Broad methods (Literature reviews/ semi-structured interviews/survey etc), N = number of respondents recruited (including country names /geographical focus and the agency used for administering survey/ recruiting agents), n= number of research articles included in the literature review and Dependant Variable (DV) = stated/revealed preferences. (iv) N/A stands for Not Available and has been used where the relevant information is not made available in the original study by the researchers.

[i] Our literature review includes a mix of quantitative and qualitative studies. Considering the nature of the latter, and that most studies of the former type are open-ended surveys without any in-built experimental protocol, we avoid providing standardised effect size metrics.